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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/668,735	09/23/2003	Ronald D. Provow	58727US002	1778

32692 7590 02/07/2007  
3M INNOVATIVE PROPERTIES COMPANY  
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EXAMINER
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MARCHESCHI, MICHAEL A

ART UNIT	PAPER NUMBER
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1755

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/07/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.

10/668,735

Applicant(s)

PROVOW ET AL.

Examiner

Michael A. Marcheschi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 November 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,4,6-10,12,14-17,20,23-26,28 and 30-38 is/are pending in the application.
- 4a) Of the above claim(s) 6-9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,4,10,12,14-17,20,23-26,28 and 30-38 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 November 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>12/22/06</u> | 6) <input type="checkbox"/> Other: _____  |

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1, 4, 10, 12, 14-17, 20, 23-26, 28 and 30-38 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. The binder, grinding aid and the abrasive particles, as defined on page 13, lines 24-26 are critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976).

Page 13, lines 24-26 states that “An essential step to make the abrasive article (feature) is the preparation of the slurry (mixing step). The slurry made by combining...a binder precursor, a grinding aid and abrasive particles.”

With respect to the claims that define the abrasive feature and article (and use thereof), in view of the above statement, it is reasonably implied that the final abrasive feature (composite) must contain the essential components of “a binder, a *grinding aid* and abrasive particles”. This is apparent because these components are essential components in the mixing of the slurry and thus the final feature will inherently contain said components, thus said components are essential components of the abrasive feature (essential components not listed in the claims).

Claims 1, 4, 10, 12, 14-17, 20, 23-26, 28 and 30-38 are rejected under 35 U.S.C. 103(a) as obvious over Hoopman (097) **in view of** Neff (099), Adefris et al. (108) and Skeem et al. (936) **alone or further** in view of Wei et al. (724) for the same reason set forth in the previous office action which are incorporated herein by reference.

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Claims 1, 4, 10, 12, 14-17, 20, 23-26, 28 and 30-38 are rejected under 35 U.S.C. 103(a) as obvious over Adefris et al. (108) in view of Hoopman (097) and Skeem et al. (936) **alone or further** in view of Wei et al. (724) for the same reason set forth in the previous office action which are incorporated herein by reference.

Claims 1, 4, 10, 12, 14-17, 20, 23-26, 28 and 30-33 are rejected under 35 U.S.C. 103(a) as obvious over Kaisaki et al. (317) in view of Skeem et al. (936) **alone or further** in view of Wei et al. (724) for the same reason set forth in the previous office action which are incorporated herein by reference.

Claims 34-38 are rejected under 35 U.S.C. 103(a) as obvious over Kaisaki et al. (317) in view of Skeem et al. (936) **alone or further** in view of Wei et al. (724), as applied to claims 10 and 26 above and further in view of Hoopman (097) for the same reason set forth in the previous office action which are incorporated herein by reference.

Applicant's arguments filed 11/14/06 have been fully considered but they are not persuasive.

Applicants argue the rejection under 35 U.S.C. 112, first paragraph, in that one skilled in the art reading the cited language would at most understand that the preparation is essential and that the slurry may comprises the combination of abrasive binder and grinding aid. This is not persuasive because a plain reading of the claims in view of the specification on page 13 would imply that all of the components (abrasive, grinding aid and binder precursor) are essential in the

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abrasive feature and thus article. If the essential method involves forming a slurry that contains, as essential components, a binder precursor, a grinding aid and abrasive particles, it would follow that the feature produced must contain all of these components. To further support the examiners position, on page 11 of the specification, applicants define "optional components" and nowhere is the grinding aid listed as an optional components, thus it is essential. Even assuming further arguendo about the grinding aid not being essential (the examiner fully disagrees), the claims, as written, do not even define that an abrasive and binder are present in the feature and these two components are clearly essential.

With respect to Hoopman (097), as the primary reference, in view of Neff (099), the examiner completely responded to applicants remarks in the previous office action and are incorporated herein by reference.

With respect to Adefris, applicants state that this reference does not use a polymeric binder. The examiner acknowledges this, however, this reference has been used to merely show that composites for abrasive articles are known to define a positive rake angle with respect to the base (undercut section), irrespective of what the feature is made of.

With respect to Wei, applicants arguments are based on the fact that this reference is not directed to the application of abrasive particles on a *top planar surface* of a composite. The examiner acknowledges this, however, this reference has been used to merely show that the application of a functional powder (abrasive) to the surface of structured abrasive modifies the abrasive qualities (i.e. assists in the abrasive cut (removal of material from a work piece)). It was stated that although this reference does not specifically state that the functional powder is applied to the *planar* surface of abrasive composites, one skilled in the art would have

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appreciated the concept of using a functional powder to be applied to any abrasive structure.

Applicants have not clearly addressed this reasoning.

With respect to Skeem, applicants argue that this reference is only directed to cutting concrete and not wood, as defined in the claimed invention. Although concrete is defined, this reference is not limited to this (claim 12 of the reference does not limit what is cut). In addition, although this reference is directed to teeth on a cutting article, it is the examiners position that one skilled in the art reading Skeem would understand, in view of the benefits defined, that the angled top is not only applicable to teeth but to any feature that is used in any abrading operations (i.e. wood). Applicants appear to also argue that the claimed invention is directed to reducing steps in preparing wood, and thus the examiners motivation of "reducing dulling" is improper. The examiner acknowledges the purpose of the claimed invention, however, the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985). The examiner has clearly established proper motivation for using an angled top and applicants arguments based on the purpose is not proper to clearly establish otherwise.

With respect to Kaisaki et al., applicants state that this reference is addressed the previous office action. The examiner acknowledges applicants remarks, however, said remarks do not clearly address the rejection at hand.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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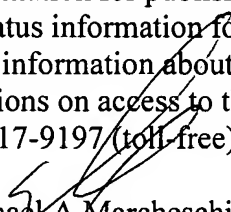
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael A. Marcheschi whose telephone number is (571) 272-1374. The examiner can normally be reached on M-F (8:00-5:30) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on (571) 272-1233. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MM  
2/07

  
Michael A. Marcheschi  
Primary Examiner  
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